PHILIPS

Philips Medical Systems

www.medical.philips.com/us

Revisions

Note for Architects and/or Contractors: "If revisions are listed, these drawings must be thoroughly reviewed so that all changes can be incorporated into your project"

Rev. Level	Date	Revision Descriptions	By

Table of Contents

Section A - Equipment Plan

General Notes ---------- AN
Equipment Plan ---------- A1
Equipment Details ---------- AD1 - AD2
Transport Details ---------- AD3

Section S - Support Plan

Support Notes ---------- SN
Support Plan - Floor ---------- S1
Support Details ---------- SD1 - SD2

Section E - Electrical Plan

Electrical Notes ---------- EN
Electrical Plan ---------- E1
Electrical Details ---------- ED1

Check List ---------- CHK

PHILIPS

- Customer Name -
City, ST
Bucky Diagnost FS Standard / Optimus 30

Date

O.A. Number

Drawn By

Quote Number

Project Number
N-SRD030017

C1

Sheet 1 of 14

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HVAC Requirement for General Equipment Locations

Heating, ventilation, air conditioning requirement for general equipment locations must maintain temperature at 75° +/- 11° fahrenheit (24° +/- 6° celsius) and non-condensing relative humidity at 47%, +/- 28%.

(03.0)

Electrical Requirements
Optimus 30 Single Phase

Supply Configuration: 1 phase, 2 wire power and ground.

Nominal Line Voltage: 208, 220, or 240 VAC, 60 Hz

Branch Power Requirement: 50 KVA

(02.0)

Minimum Site Preparation Requirements

A smooth efficient installation is vital to Philips and its' customers. Understanding what the minimum site preparation requirements are will help achieve this goal. The following list clearly defines the requirements which must be fulfilled before the installation can begin.

1. Walls to be painted or covered, baseboards installed, floors to be tiled and/or covered, ceiling shall have grid tiles and lighting fixtures installed.

2. Doors and windows, especially radiation protection barriers, installed and finished with locksets operational.

3. All electrical convenience, conduit, raceway and junction boxes installed.

4. Incoming mains power operational and connected to room x-ray breaker.

5. 115v convenience outlets operational.

6. All support structures correctly installed. All channels, pipes, beams and/or other supporting devices should be level, parallel, and free of lateral or longitudinal movements.

7. All contractor supplied cables pulled and terminated.

8. A dust-free environment in and around the procedure room.

9. All HVAC (heating, ventilating and air conditioning) installed and operational as per specifications.

10. Architectural features such as computer floor, wood floor, casework, bulkheads, installed and finished. When technical cabinets are installed in a closet with doors, it is suggested that the customer install a temperature alarm in the event of an air conditioning failure.

11. All plumbing installed and finished.

12. Philips does not install or connect developing tanks, automatic processors or associated equipment, built in illuminators, cassette pass boxes, loading benches and cabinets, lead protective screens, panels or lead glass window and frame. This is to be done by the customer/contractor.

13. Clear door openings for moving equipment into the building must be 42" (1067mm) w x 82" (2083mm) h min. 48" (1219mm) w x 82" (2083mm) h rec., or larger contingent on an 8'-0" (2438mm) corridor width.

Note
Once Philips has moved equipment into the suite and started the installation, the contractor shall schedule his work around the Philips installation team on site. It is suggested that a telephone be provided in the room to receive telephone calls. This would alleviate facility staff from answering calls for Philips personnel.

Remote Service Diagnostics
Medical imaging equipment to be installed by Philips Medical is equipped with a service diagnostic feature which allows for remote and on site service diagnostics. To establish this feature, a dedicated direct-distance - dialing, voice-grade line must be installed as shown on plan. All costs with this feature are the responsibility of the customer.

(00.1)

General Specifications

1. Responsibility
The customer shall be solely responsible, at its expense for preparation of site, including any required structural alterations. The site preparation shall be in accordance with plans and specifications provided by Philips. Compliance with all safety, electrical, and building codes relevant to the equipment and its installation is the customer's responsibility. Sufficiency of such plans and specifications, specifically including, but not limited to the accuracy of the dimensions described therein, shall be the sole responsibility of customer. The customer shall advise Philips of conditions at or near the site which could adversely affect the carrying out of the installation work and shall ensure that such conditions are corrected and that the site is fully prepared and available to Philips before the installation work is due to begin. The customer shall provide all necessary plumbing, carpentry work, or conduit wiring required to attach and install products ready for use.

2. Permits
Customer shall obtain all permits and licenses required by federal, state/provincial or local authorities in connection with the construction, installation and operation of the products and shall bear any expense in obtaining same or in complying with any related rules, regulations, ordinances and statutes.

3. Radiation Protection
The customer or his contractor, at his own expense, shall obtain the service of a licensed radiation physicist to specify radiation protection. For the purpose of the radiation protection design for the suite, the physicist should assume a maximum kVp x-ray tube output of 150.

4. Asbestos and Other Toxic Substances
Philips assumes no hazardous waste (i.e., pcb's in existing transformers) exists at the site. If any hazardous materials are found, it shall be the sole responsibility of the customer to properly remove and dispose of this material at its expense. Any delays caused in the project for this special handling shall result in Philips time period for completion being extended by like period of time. Philips assumes that no asbestos material is involved in this project in any ceilings, walls or floors. If any asbestos material is found anywhere on the site, it shall be the customer's sole responsibility to properly remove and/or make safe this condition, at the customer's sole expense.

5. Labor
In the event local labor conditions make it impossible or undesirable to use Philips' regular employees for such installation and connection, such work shall be performed by laborers supplied by the customer, or by an independent contractor chosen by the customer at the customer's expense, and in such case, Philips agrees to furnish adequate engineering supervision for proper completion of the installation.

6. Schedule
The general contractor should provide Philips with a schedule of work to assist in the coordination of delivery of Philips supplied products which are to be installed by the contractor and delivery of the primary equipment.

7. Extended Installation or Turnkey Work by Philips.
Any room preparation requirements for Philips equipment indicated on these drawings is the responsibility of the customer. If an extended installation or turnkey contract exists between Philips and the customer for room preparation, then additional work required for the equipment will not be represented on these drawings. Some of the responsibilities of the customer as depicted in these drawings may be assumed by Philips. In the event of a conflict between the work described in the turnkey contract workscope and these drawings, the turnkey contract workscope shall govern.

(00.0)

PHILIPS

- Customer Name -
City, ST
Bucky Diagnost FS Standard / Optimus 30

Date | O.A. Number
Drawn By | Quote Number

Project Number
N-SRD030017

AN
Sheet 2 of 14

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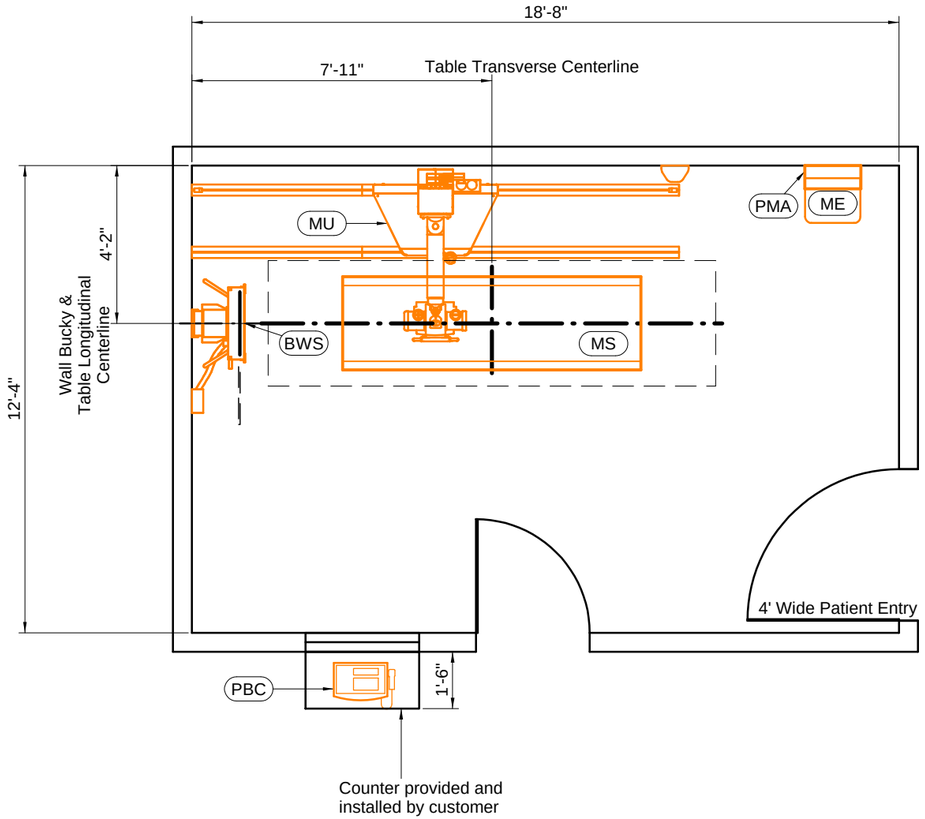
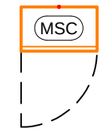


Equipment Legend

A Furnished and installed by Philips
B Furnished by customer/contractor and installed by customer/contractor
C Installed by customer/contractor
D Furnished by Philips and installed by contractor
E Existing
F Future
G Option

	Equipment Designation	Description	Weight (lbs)	Heat Load (btu/hr)	Detail Sheet
A	MU	Bucky Diagnost FS Standard	528	xxx	AD1
A	MS	Bucky Diagnost TH	549	853	AD2
A	ME	Optimus 30 Control Cabinet	124	1024	AD1
A	PBC	Optimus Control Panel	9	137	AD1
A	PMA	Power Mains Adapter	78	xxx	AD1
A	BWS	Bucky Diagnost VE (Left)	352	200	AD2
A	MSC	Manual Storage Cabinet	60	0	AD2



Final location to be coordinated with
the customer and architect of record.

Equipment Layout

Minimum Ceiling Height : 7' - 11 9/32" (2420mm)

Reported Existing Ceiling Height : None

Ceiling heights (from finished floor to finished ceiling)
other than recommended may impact equipment functionality;
consult with Philips.

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Bucky Diagnost FS Standard / Optimus 30

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A1
Sheet 3 of 14

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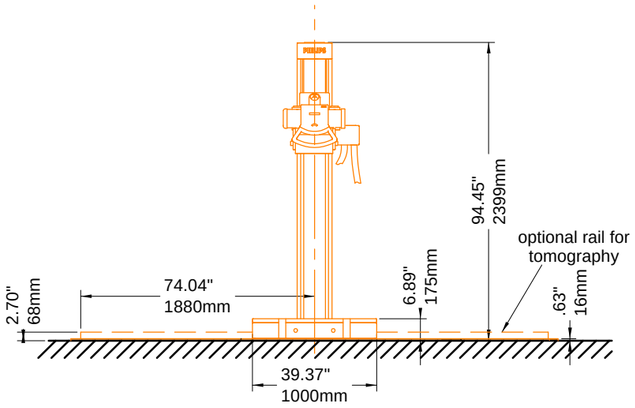
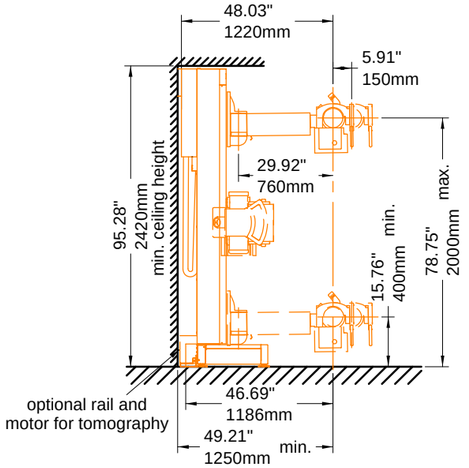
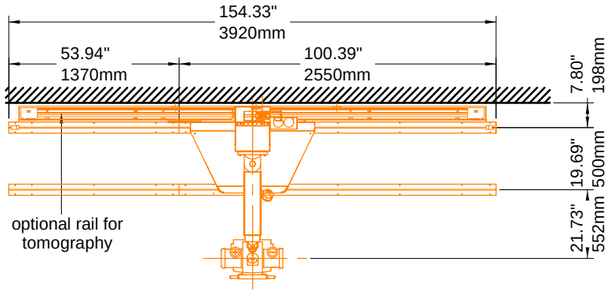
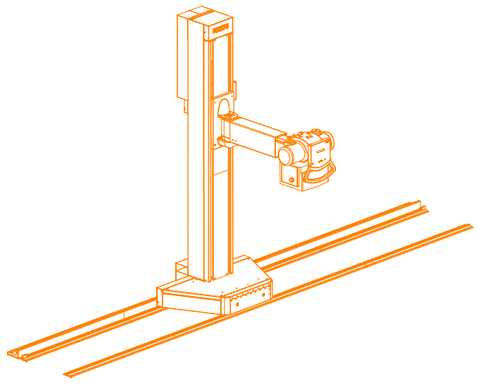


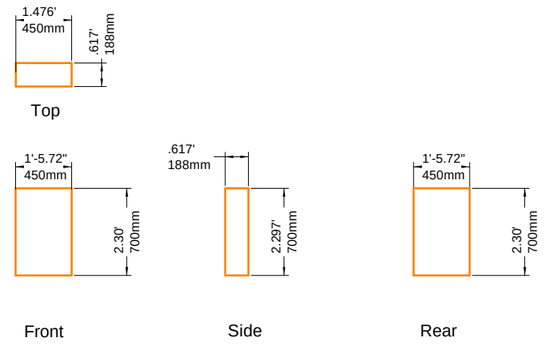






(04.0)

MU	Bucky Diagnost FS (Standard Version)	
Weight	528 lbs	(240 kg)
Heat Dissipation	1707 Btu/hr	(430 kcal/hr)



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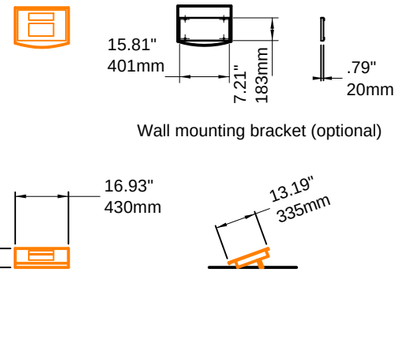
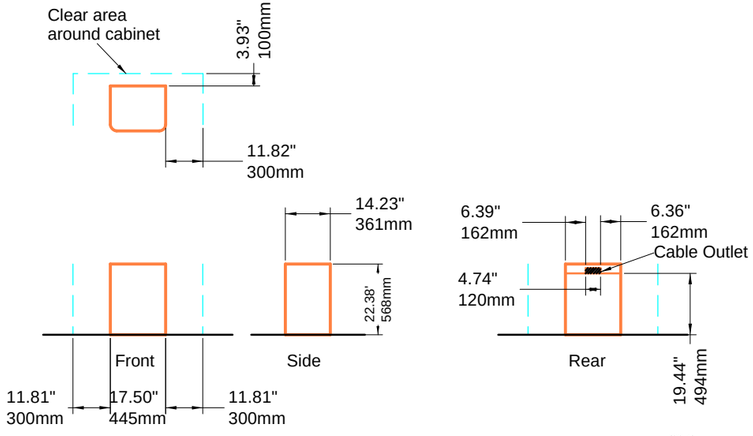
PMA	Power Mains Adapter	
Weight	78 lbs	(35 kg)
Heat Dissipation	---	---



(00.0)

PBC	Optimus 30 Control Desk	
Weight	9 lbs	(4 kg)
Heat Dissipation	137 Btu/hr	(35 kcal/hr)



(03.1)

ME	Optimus 30 Generator Cabinet	
Weight	124 lbs	(56 kg)
Heat Dissipation	1024 Btu/hr	(258 kcal/hr)

PHILIPS

- Customer Name - City, ST

Bucky Diagnost FS Standard / Optimus 30

Date | O.A. Number

Drawn By | Quote Number

Project Number N-SRD030017

AD1

Sheet 4 of 14

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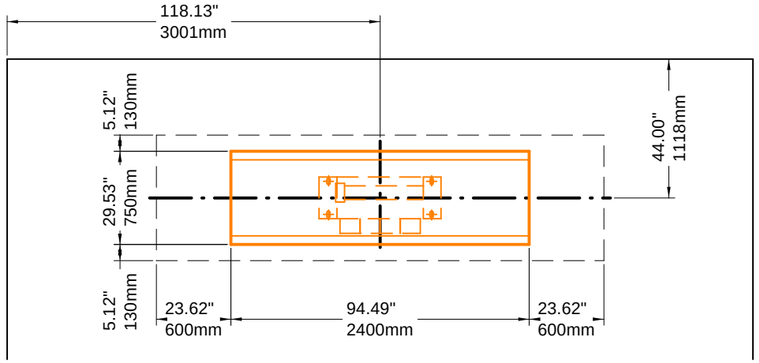
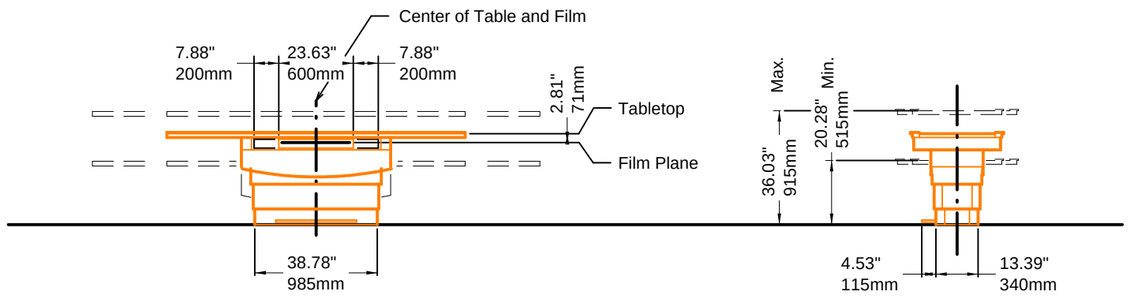
Clearance required for insertion of Tabletop (Either Side)



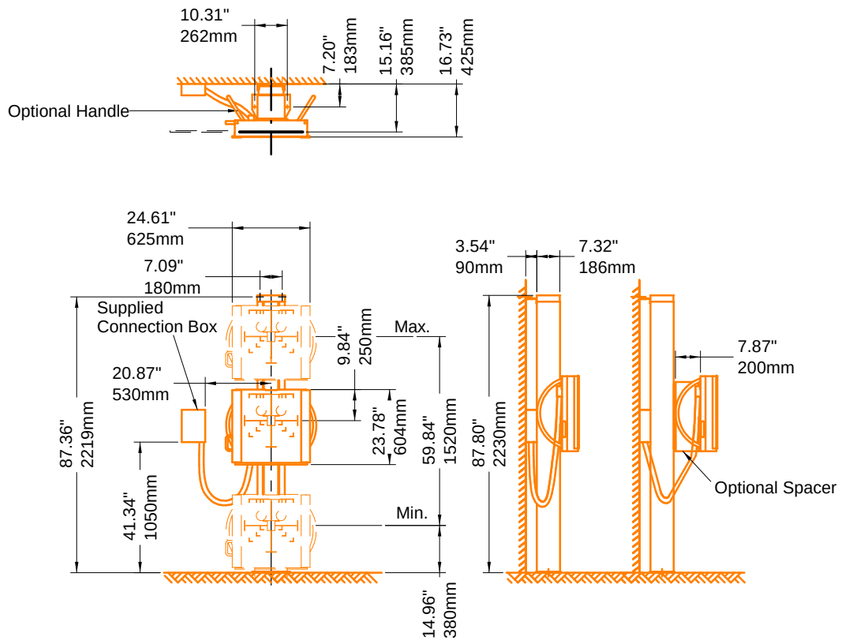


Bucky Diagnost TH with Tomo Option

Weight: 576 lbs (261 kg)
Heat Dissipation: 1365 btu/hr (344 kCal/hr)

(04.0)

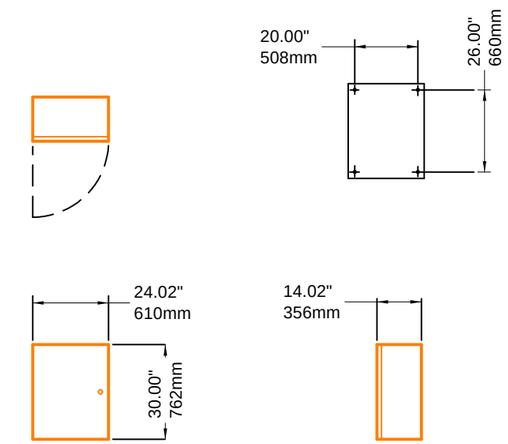
MS	Bucky Diagnost TH	
Weight	549 lbs	(249 kg)
Heat Dissipation	853 Btu/hr	(215 kcal/hr)



Unit can be purchased for left hand or right hand operation

(00.1)

BWS	Bucky Diagnost VE	
Weight	352 lbs	(160 kg)
Heat Dissipation	200 Btu/hr	(50 kcal/hr)



Max. weight of cabinet with manuals = 260 lbs. (118 kg)

(03.0)

MSC	Manual Storage Cabinet	
Weight	60 lbs	(27 kg)
Heat Dissipation	0 Btu/hr	(0 kcal/hr)

PHILIPS

- Customer Name -
City, ST

Bucky Diagnost FS Standard / Optimus 30

Date | O.A. Number
Drawn By | Quote Number
Project Number N-SRD030017

AD2
Sheet 5 of 14

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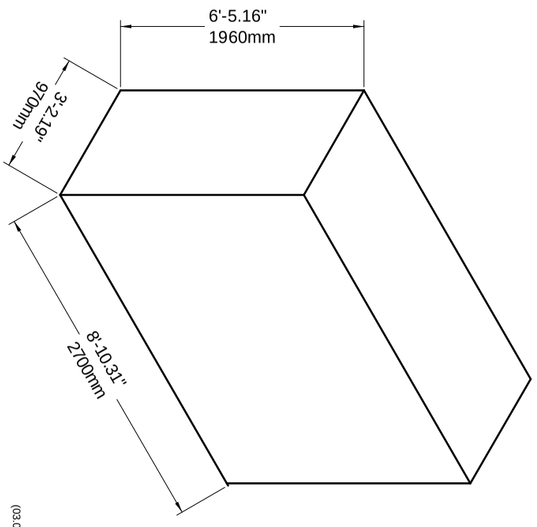

(03.0)

Crate A

Rails, Tube Column and Table
Weight: 1918 lbs.

AD3 Sheet 6 of 14	Project Number N-SRD030017	Drawn By	Date	**- Customer Name - City, ST Bucky Diagnost FS Standard / Optimus 30**
		Quote Number	O.A. Number	

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Equipment Support Information

1. General
The customer shall be solely responsible, at its expense, for preparation of the site, including any required structural alterations. The site preparation shall be in accordance with this plan and specifications, the architectural/construction drawings and in compliance with all safety and building codes. The customer shall be solely responsible for obtaining all construction permits from jurisdictional authority.

2. Equipment Anchorage
Philips provides, with this plan and specifications, information relative to equipment size, weight, shape, anchoring hole locations and forces which may be exerted on anchoring fasteners. The customer shall be solely responsible, through the engineer of record for the building, to provide on the architectural/construction drawings, information regarding the approved method of equipment anchoring to floors, wall and/or ceiling of the building. Any anchorage test required by local authority shall be the customer's responsibility. Stud type anchor bolts should not be specified as they hinder equipment removal for service. Consult with Philips service prior to specifying anchor methods.

3. Floor Loading and Surface
Philips provides, with this plan and specifications, information relative to size, weight and shape of floor mounted equipment. The customer shall be solely responsible, through the engineer of record for the building, to provide on the architectural/construction drawings confirmation of the structural adequacy of the floor upon which the equipment will be placed. Any load test required by local authority, shall be the customer's responsibility.
The floor surface upon which Philips equipment is to be placed/anchored shall be flat and level to within plus or minus 1/16 inch (2mm).

4. Ceiling Support Apparatus
Philips provides, with this plan and specifications, information relative to size, weight and shape of ceiling supported equipment. The customer shall be solely responsible, through the engineer of record for the building, to provide on the architectural/construction drawings, information regarding the approved method of structural support apparatus, fasteners and anchorage to which Philips will attach equipment. Any anchorage and/or load test required by local authority shall be the customer's responsibility.

Contractor to clearly mark Philips equipment longitudinal centerline on bottom of each structural support.

The structural support apparatus surface to which Philips equipment is to be attached, shall have horizontal equipment attachment surfaces parallel, square and level to within plus or minus 1/16 inch (2mm).

Any drilling and/or tapping of holes required to attach Philips equipment to the structural support apparatus shall be the responsibility of the customer.

Fasteners/anchors (i.e., bolts, spring nuts, lock and flat washers) and strip closures shall be provided by the customer.

5. Lighting
Lighting fixtures shall be placed in such a position that they are not obscured by equipment or its movement, nor shall they interfere with Philips ceiling rails and equipment movement or otherwise adversely affect the equipment. Such lighting fixture locations shall be the sole responsibility of the customer.

6. Ceiling Obstructions
There shall be no obstructions that project below the finished ceiling in the area covered by ceiling suspended equipment travel.

7. Seismic Anchorage (For Seismic Zones Only)
All seismic anchorage hardware, including brackets, backing plates, bolts, etc., shall be supplied and installed by the customer/contractor unless otherwise specified within the support legend on this sheet. Installation of electronic cabinets to meet seismic anchorage requirements must be accomplished using flush mounted expansion type anchor/bolt systems to facilitate the removal of a cabinet for maintenance. Do not use threaded rod/adhesive anchor systems. Consult with Philips regarding any anchor system issues.

8. Floor Obstructions/ Floor Coverings
There shall be no obstructions on the floor (sliding door tracks, etc.) in front of the Philips technical cabinets. Floor must be clear to allow cabinets to be pulled away from the wall for service.

Contractor to verify with Philips the preferred floor covering installation method.

(03.0)

PHILIPS

- Customer Name -
City, ST
Bucky Diagnost FS Standard / Optimus 30

Date | O.A. Number
Drawn By | Quote Number
Project Number N-SRD030017

SN
Sheet 7 of 14

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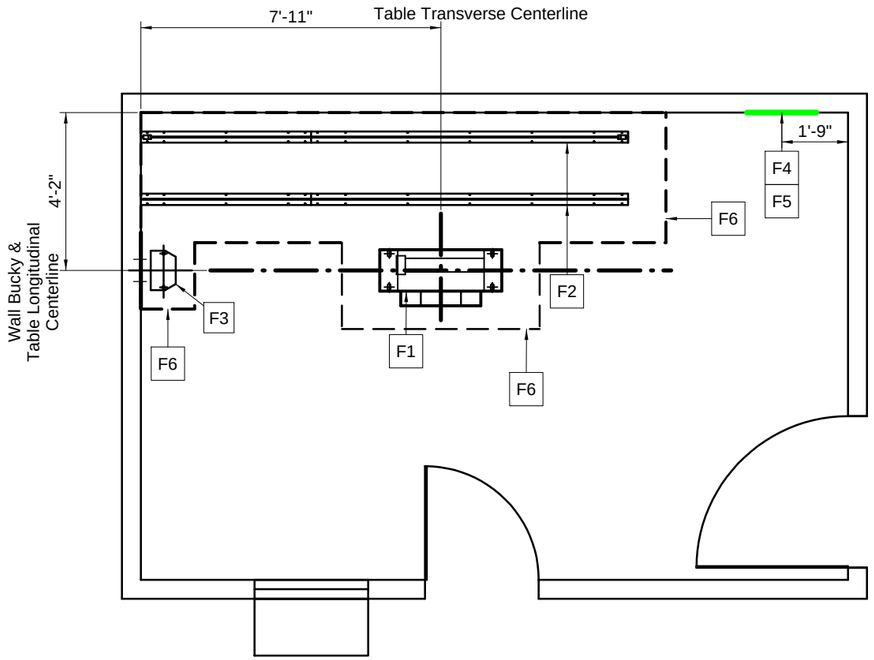
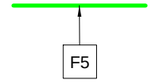


Floor Support Legend

A Furnished and installed by Philips
B Furnished by customer/contractor and installed by customer/contractor
C Installed by customer/contractor
D Furnished by Philips and installed by contractor
E Existing
F Future
G

Item Number | Description | Detail Sheet

D	F1	Bucky Diagnost TH Floorplate Anchorage	SD2
B	F2	Bucky Diagnost FS Floor Rail Anchorage	SD1
B	F3	Bucky Diagnost VE Anchorage	SD2
B	F4	Power Mains Adapter Anchorage	SD2
B	F5	Manual Storage Cabinet Anchorage	SD2
B	F6	Floor must be level within this area - See note "3. Floor Loading and Surface" on sheet SN	SN

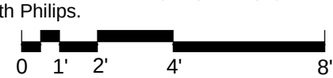


Final location to be coordinated with the customer and architect of record.

Floor Support Layout

Minimum Ceiling Height : 7' - 11 9/32" (2420mm)

Ceiling heights (from finished floor to finished ceiling)
other than recommended may impact equipment functionality;
consult with Philips.



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N-SRD030017

S1
Sheet 8 of 14

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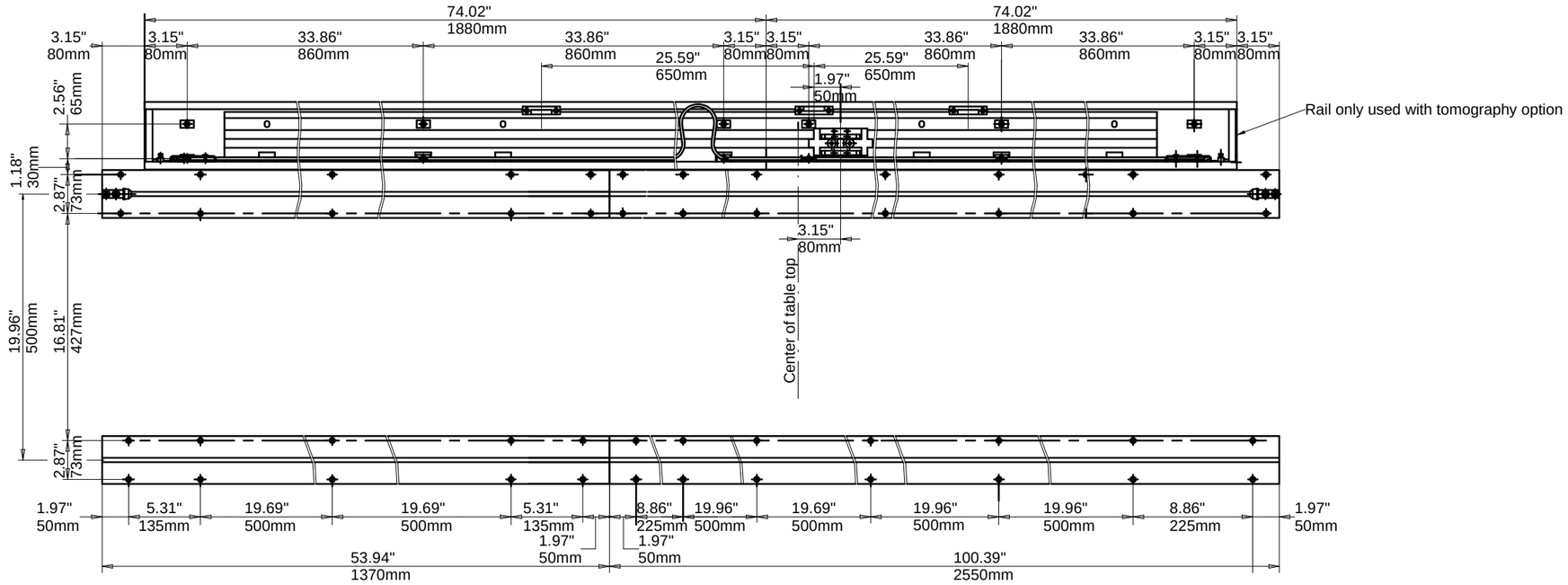

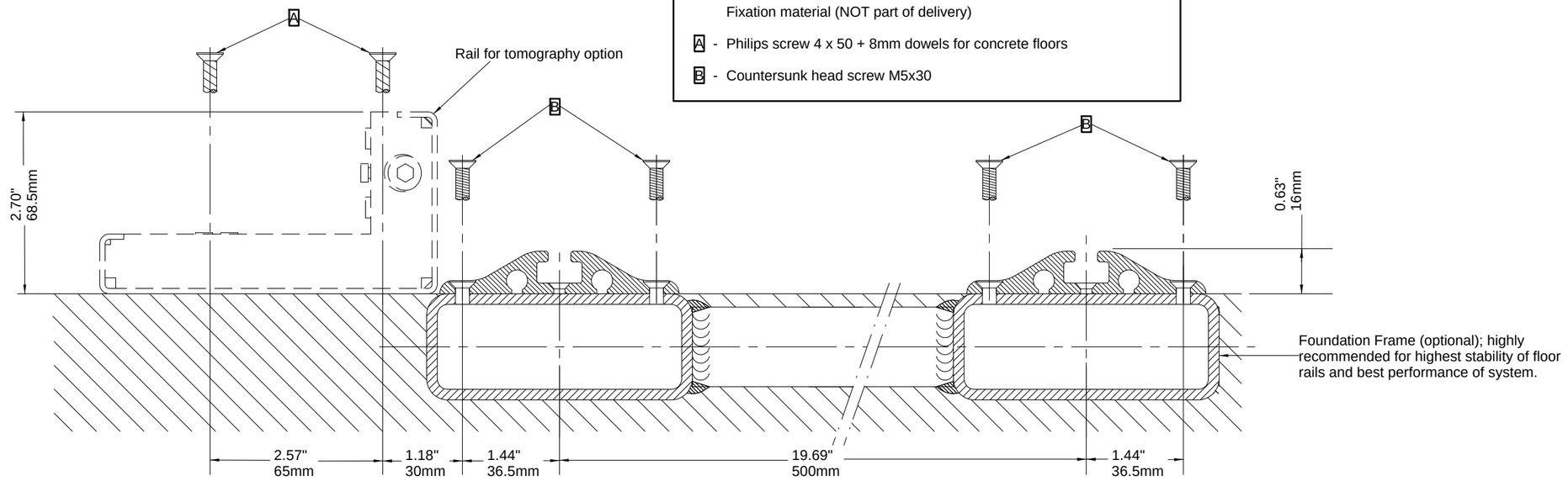
Fixation material (NOT part of delivery)
A - Philips screw 4 x 50 + 8mm dowels for concrete floors
B - Countersunk head screw M5x30
A
Rail for tomography option
B
B
2.70" 68.5mm
0.63" 16mm
Foundation Frame (optional); highly recommended for highest stability of floor rails and best performance of system.
2.57" 65mm
1.18" 30mm
1.44" 36.5mm
19.69" 500mm
1.44" 36.5mm

Detail - Bucky Diagnost FS Standard Floor Rail (04.0)

* Not to scale

Bolt Forces: Slab on Grade		Bolt Forces: Upper Floor	
T max (Tension)	= xxx lbs/bolt	**T** max (Tension)	= xxx lbs/bolt
V max (Shear)	= xxxlbs/bolt	**V** max (Shear)	= xxx lbs/bolt

F2

PHILIPS

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Project Number N-SRD030017

SD1

Sheet 9 of 14

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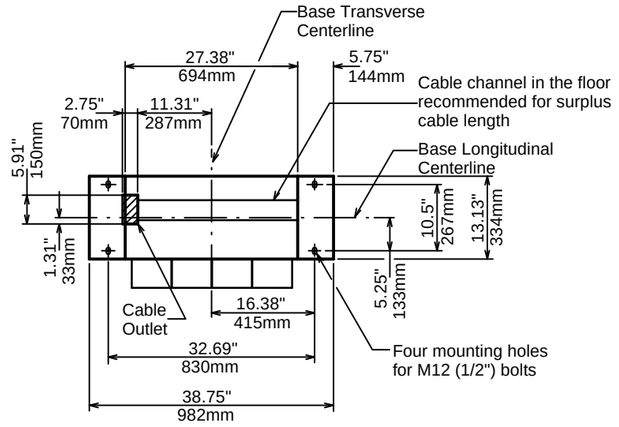
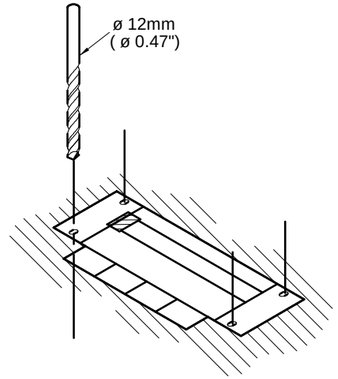
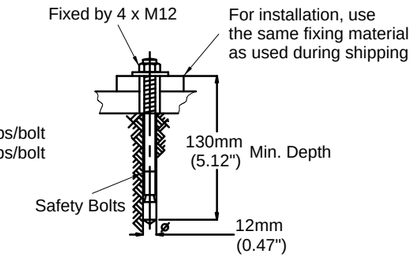






Bolt Forces: Slab on Grade
T max (Tension) = 177 lbs/bolt
V max (Shear) = 105 lbs/bolt

Bolt Forces: Upper Floor
T max (Tension) = 540 lbs/bolt
V max (Shear) = 197 lbs/bolt

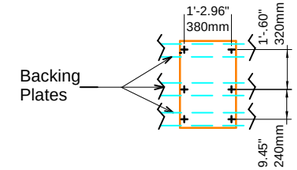
The Diagnost TH base mounts directly to floor.
Floorplates are not used.

Detail - Diagnost TH / TF Table Base

Not to Scale

(04.0)

F1

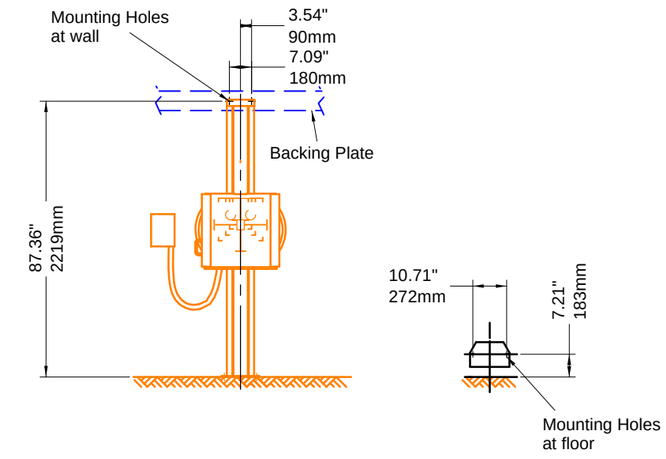


The customer's architect/engineer of record shall specify a sufficient wall backing plates.

Power Mains Adapter Mounting Detail

(01.0)

F4



Bucky VE Wall Mounting Detail

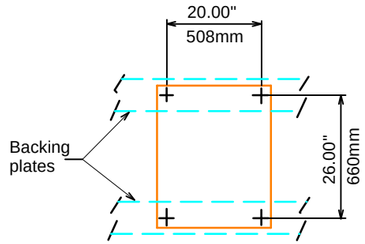
(03.1)

The customer's architect/engineer of record shall specify a wall backing plate sufficient for the bolt forces shown.

Bolt Forces: Slab on Grade
T max (Tension) = 257 lbs/bolt
V max (Shear)(wall) = 59 lbs/bolt
V max (Shear)(floor) = 154 lbs/bolt

Bolt Forces: Upper Floor
T max (Tension) = 370 lbs/bolt
V max (Shear)(wall) = 76 lbs/bolt
V max (Shear)(floor) = 94 lbs/bolt

F3



Manual Storage Cabinet Wall Mounting Detail

The customers architect/engineer of record shall specify a wall backing plate sufficient for the bolt forces shown.

Bolt Forces:
T max (Tension) = 107 lbs/bolt
V max (Shear) = 146 lbs/bolt

(03.0)

F5

PHILIPS

- Customer Name - City, ST

Bucky Diagnost FS Standard / Optimus 30

Date

O.A. Number

Drawn By

Quote Number

Project Number N-SRD030017

SD2

Sheet 10 of 14

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General Electrical Information

1. General
The customer shall be solely responsible, at its expense, for preparation of the site, including any required electrical alterations. The site preparation shall be in accordance with this plan and specifications, the architectural/construction drawings and in compliance with all safety and electrical codes, the customer shall be solely responsible for obtaining all electrical permits from jurisdictional authority.

2. Materials and Labor
The customer shall be solely responsible, at its expense, to provide and install all electrical ducts, boxes, conduit, cables, wires, fittings, bushing, etc., As separately specified herein.

3. Electrical Ducts and Boxes
Electrical ducts and boxes shall be accessible and have removable covers. Floor ducts and boxes shall have watertight covers. Ducts shall be divided into as many as three separate channels by metal dividers, separately specified herein, to separate wiring and/or cables into groups as follows: Group a, power wiring and/or cables. Group b: signal and/or data and protective ground wiring and/or cables. Group c: x-ray high voltage cables, the use of 90 deg. ells is not acceptable. On ceiling duct and wall duct use 45 deg. bends at all corners. All intersecting points in duct to have cross over tunnels supplied and installed by contractor to maintain separation of cables.

4. Conduit
Conduit point - to - point runs shall be as direct as possible. Empty conduit runs used for cables may require pull boxes located along the run. Consult with Philips. A pull wire or cord shall be installed in each conduit run. All conduits which enter duct prior to their termination point must maintain separation from other cables via use of dividers, cross over tunnels, or conduit supplied and installed by contractor from entrance into duct to exit from duct. Do no use flex conduit unless approved by Philips Service.

5. Conductors
All conductors, separately specified, shall be 75° c stranded copper, rung out and marked.

6. Disconnecting Means
A disconnecting means shall be provided as separately specified.

7. Warning Lights and Door Switches
"x-ray on" warning lights and x-ray termination door switches should be provided at all entrances to x-ray rooms as required by code.

8. Dimmer Switches
X-ray room lights should be provided with dimmer switches.

(03.0)

Electrical Notes

1. The contractor will supply & install all breakers, shunt trip and incoming power to the breakers. The exact location of the breakers and shunt trips will be determined by the architect or contractor.

2. The contractor shall supply & install all pull boxes, raceways, conduit runs, stainless steel covers, etc. Conduit/raceways must be free from burrs and sharp edges over its entire length. A Greenlee pull string/measuring tape (part no. 435, or equivalent) shall be provided with conduit runs.

3. All pre - terminated, cut to length cables, will be supplied and installed by Philips Medical Systems. All cables to the breakers, will be supplied and installed by the contractor, subject to local arrangements.

4. Provide and install 4 - 2" (50 mm) dia. Chase nipples between adjacent wall boxes where applicable.

5. Electrical raceway shall be installed with removable covers. The raceway should be accessible for the entire length. In case of non - accessible floors, walls and ceilings, an adequate number of access hatches should be supplied to enable installation of cabling. Approved conduits may be substituted. All raceways will be designed in a manner that will not allow cables to fall out of the raceway when the covers are removed. In most cases, this will require above - ceiling raceway to be installed with the covers removable from the top. Raceway system as illustrated on this drawing are based upon length of furnished cables. Any changes in routing of raceway system could exceed maximum allowable length of furnished cables. Conduit or raceway above - ceiling must be kept as near to finished ceiling as possible.

6. Conduit sizes shall be verified by the architect, electrical engineer or contractor, in accordance with local or National Electrical Codes, whichever govern.

7. Convenience outlets are not illustrated. Their number and location are to be specified by the customer/architect.

8. All sections of raceway and conduit shall be grounded with an independent #6 a.w.g.green wire that is to be attached using solderless lugs. All ceiling mounted structural support members and ceiling plates shall also be grounded. All grounding connections, terminals, etc. Shall be installed in a manner to provide accessibility for inspection, maintenance, repair, etc.

(99.0)

Electrical Legend

A Furnished and installed by Philips
B Furnished by customer/contractor and installed by customer/contractor
C Installed by customer/contractor
D Furnished by Philips and installed by contractor
E Existing
F Future
G

Item Number | Description | Detail Sheet

	Item Number	Description	Detail Sheet
B	CB1	208V, 1 phase 125 AMP circuit breaker with shunt trip for #1 A.W.G. cable. Run power from breaker to "PMA" (for "ME"). See sheet "ED1" for power quantity requirements. Location per local code or owner requirements. Coordinate with Philips.	ED1
B	CB2	208V, 1 phase 15 AMP circuit breaker with shunt trip for #1 A.W.G. cable. Run power from breaker to "PMA" (for "MS"). See sheet "ED1" for power quantity requirements. Location per local code or owner requirements. Coordinate with Philips.	ED1
B	ST	Shunt trip (emergency off) - large mushroom-head button on remote control station with contacts to operate feature of "CB." (if required by local code or owner, and mandatory for VA and D.O.D. installations). Its location must be within easy reach but not subject to an accidental bump. Exact location to be determined by customer or Philips service personnel. (not shown)	
D	PMA	Power Mains Adapter 800VA. Mount above "ME." Run power from "PMA" to "ME" and from "PMA" to "MS," leaving 8" tail. See sheet "ED1" for power quality requirements. Location per local code or owner requirements. Coordinate with Philps.	
D	ME	15"W x 12"H x 4"D wall box with removable screw-type cover plate, surface mounted 22" A.F.F. to top of box. Conduits to terminate on top & sides of the box as required. Provide knock-outs with chase nipples.	
B	PBC	6"W x 6"L x 4"D pull box with removable screw-type cover plate, surface mounted 22" A.F.F. to bottom of box. Provide a 2 1/2" dia. knock-out with chase nipple. Exact location T.B.D. by local Philips service.	
B	MS	8"W x 8"L x 4"D floor box, flush mounted with removable gasketted screw-type cover plate.	
B	MU	(2) 8"W x 8"L x 4"D wall boxes, flush mounted with removable screw-type coverplate. Bottom of boxes to be 86" A.F.F. Connect the two boxes as required; consult local Philips service for exact configuration.	
B	BWS	6"W x 6"L x 4"D pull box with removable screw-type cover plate, flush mounted 42" A.F.F. to bottom of box. Provide a 2 1/2" dia. chase nipple.	
B	WL	Warning light - provide an incandescent surface or flush mounted light fixture above door to indicate when X-Ray is on. Provide a 115V, 15A normally open relay in this fixture. (Not shown on plan)	ED1
B	DS	Door switch - 120V, 5A switch limited to open when door is open. Mount in upper corner on strike side of main entry door(s) (Arrow-Hart no. 4030, Edwards no. 45 or equivalent), if required by local code or physicist of record. (Not shown on plan)	ED1

PHILIPS

- Customer Name -
City, ST

Bucky Diagnost FS Standard / Optimus 30

09.30.04

Date | O.A. Number
Drawn By | Quote Number
Project Number N-SRD030017

EN
Sheet 11 of 14

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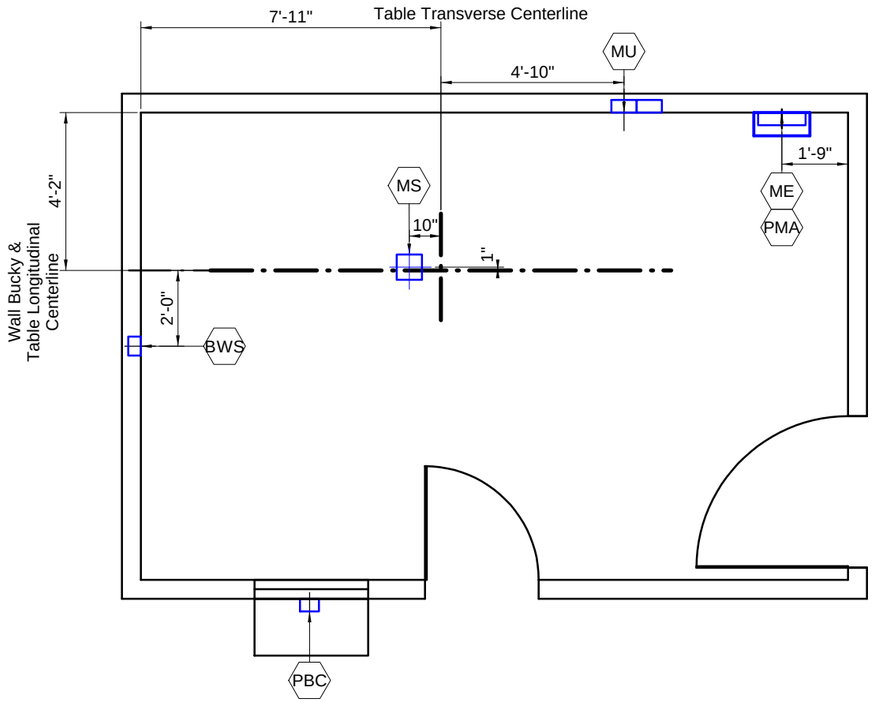


Electrical Layout

Minimum Ceiling Height : 7' - 11 9/32" (2420mm)

Ceiling heights (from finished floor to finished ceiling) other than recommended may impact equipment functionality; consult with Philips.

0 1' 2' 4' 8'

Refer to Electrical Legend - Sheet EN

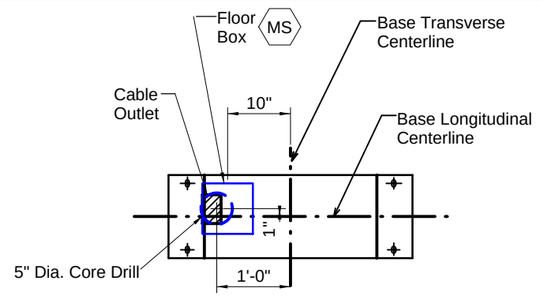
Conduit Required

General Notes

1. All conduit runs must take most direct route point to point.
2. All conduit runs must have a pull string.

A Conduit supplied/installed by contractor - Philips cables installed by Philips
B Conduit supplied/installed by contractor - Philips cables installed by contractor
C Conduit and cables supplied and installed by contractor
D Conduit existing - cables supplied and installed by Philips
E Conduit existing - cables supplied by Philips, installed by contractor
F Conduit existing - cables supplied and installed by contractor

	Conduit			Conduit Quantity	Minimum Conduit Size	Maximum Conduit Length	Special Requirements
	Run No.	From	To				
C	1	CB1	Hospital Power Panel	Per N.E.C.	Per N.E.C.	Per N.E.C.	
C	2	CB2	Hospital Power Panel	Per N.E.C.	Per N.E.C.	Per N.E.C.	
C	3	CB1	PMA	1	Per N.E.C.	Per N.E.C.	
C	4	CB2	PMA	1	Per N.E.C.	Per N.E.C.	
C	5	CB1	ST	1	3/4"	50'	
C	6	CB2	ST	1	3/4"	50'	
B	7	PMA	ME	1	2"	19'	
B	8	PMA	MS	1	1 1/2"	26'	
C	9	ME	WL	1	1/2"	50'	
C	10	ME	DS	1	1/2"	50'	
A	11	ME	PBC	2	2"	65'	
A	12	BWS	ME	2	2"	45'	
A	13	ME	MU	3	2 1/2"	32'	
A	14	ME	MS	3	2"	19'	



Provide a 5" dia. core drill if the floor cannot accomodate a standard 8"W x 8"L x 4"D floor box for "MS."

Detail - Diagnost TH Table Base
Not to Scale

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- Customer Name - City, ST

Bucky Diagnost FS Standard / Optimus 30

Date | O.A. Number
Drawn By | Quote Number
Project Number N-SRD030017

E1
Sheet 12 of 14

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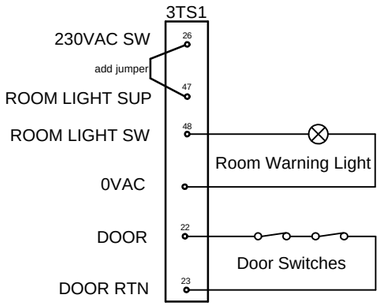

Detail for Connection of X-Ray On Light & Door Switch

(Optimus 30 Single phase generator only)

WL DS

CB1 CB2

Eletrical Requirement Notes

Electrical power distribution at the facility shall comply with:

Utilization voltages per ANSI C84.1 - 1982 range A.

Voltage to be supplied is 3 phase, 3 wire power and ground (delta or wye) unless otherwise noted in equipment specifications.

Phase conductors to be sized for instantaneous voltage drop per NEC 517 - 73 and Philips recommendations.

Neutral and ground conductors to be sized equivalently to phase conductors, unless otherwise noted.

Metal conduit shall not be used as the equipment ground conductor.

Clamping type surge suppressors are highly recommended in addition to standing facility lighting arrestors. Equipment to be protected from ANSI/IEEE C62.41-1980 location category B impulses.

ANSI / NFPA 70 - National Electrical Code
Article 250 - grounding
Article 517 - health care facilities

ANSI / NFPA 99 - health care facilities

NEMA standard XR0 - power supply guideline for x-ray machines

Power Quality Guidelines

1. Power supplied to medical imaging equipment must be separate from power feeds to air conditioning, elevators, outdoor lighting, and other frequently switched or motorized loads. Such loads can cause waveform distortion and voltage fluctuations that can hinder high quality imaging.

2. Equipment that utilizes the facility power system to transmit control signals (especially clock systems) may interfere with medical imaging equipment, thus requiring special filtering.

3. The following devices provide a high impedance, nonlinear voltage source, which may affect image quality:
Static UPS systems, Series filters, Power conditioners, and Voltage regulators.

Do not install such devices at the mains supply to medical imaging equipment without consulting Philips installation or service personnel.

4. Line impedance is the combined resistance and inductance of the electrical system and includes the impedence of the power source, the facility distribution system, and all phase conductors between the source and the imaging equipment. Philips publishes recommended conductor sizes based on equipment power requirements, acceptable voltage drops, and assumptions about the facility source impedance. The minimum conductor size is based on the total line impedance and NEC requirements. Unless impedance calculations are performed by an electrical engineer, the recommended values must be used.

Power Quality Requirements

Optimus 30 Single Phase

Power Output:	30 KW
Supply Configuration:	1 phase, 2 wire power and ground
Nominal Line Voltage:	208, 220, or 240 VAC, 60 Hz
Line Voltage Variation:	± 10% steady-state
Frequency Variation:	± 0.5 Hz
Line Impulses:	1000 VPK above phase-neutral RMS absolute maximum. No more than 1 impulse per hour to exceed 500 VPK.
High Frequency noise:	3.0 volts steady-state maximum. Over 3.0 volts permitted for 100 msec. maximum, 1 per hour maximum.
Ground Conductor Impedance:	0.1 Ohms @ 60 Hz maximum

Branch Circuit and Wire Gauge Requirements

Optimus 30 Single Phase

Branch Power:	50 KVA
Circuit Breaker:	1 pole, 125amperes (to PMA for Generator) 1 pole, 15 amperes (to PMA for Table)
Maximum Instantaneous Power:	50.15 KVA

Recommended conductor sizes for 1% impedance of branch conductors.
Based on 20°C copper conductors:

	208 VAC	220 VAC	240 VAC
#1 AWG	33 ft.	37 ft.	44 ft.
#1/0 AWG	41 ft.	46 ft.	55 ft.
#2/0 AWG	52 ft.	58 ft.	69 ft.
#3/0 AWG	66 ft.	74 ft.	88 ft.
#4/0 AWG	84 ft.	94 ft.	112 ft.
250 MCM	98 ft.	110 ft.	131 ft.
300 MCM	118 ft.	132 ft.	157 ft.
350 MCM	138 ft.	154 ft.	183 ft.

Inst. Current	240 A	227 A	208 A
Max. Phase-phase Impedance	0.07 Ω	0.07 Ω	0.07 Ω
Max. Load Voltage Drop	416.8 V	15.9 V	14.6 V
Percent Regulation at Maximum Load	8.1 %	7.2 %	6.1 %

Minimum copper wire size, circuit breaker to equipment: #1 AWG

CB1 CB2

PHILIPS

- Customer Name -
City, ST

Bucky Diagnost FS Standard / Optimus 30

09.30.04

Date

O.A. Number

Drawn By

Quote Number

Project Number
N-SRD030017

ED1

Sheet 13 of 14

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Modality Checklist

- ☐ Unistrut installed and level according to Philips specifications
- ☐ Blocking support for wall stand
- ☐ Conduit lenghts measured according to Philips specifications. NOTE: Specifications are from source box to destination box (not just conduit run length)
- ☐ Wall support for wall stand

Instructions

This form is to be used by Project Manager, Contractor and Service Engineer.

Information is used to develop and determine site ready date.

Items listed are go/no go items for delivery unless noted as delay only items.

Items identified with *** as delayed items must be completed after hours or on weekend. These itmes cannot be accomplished while installation is in progress. Also, these items must be completed within two days of installation start or they may stop installation.

Site Readiness Checklist

Modality: _____

OA#: _____

Site Name: _____

Location: _____

Contact Name: _____

Contact Phone Number: _____

- ☐ Customer site preparation verified in general against the Philips final planning drawings.
- ☐ Walls finished including painting.
- ☐ Doors installed.
- ☐ Floor leveled according to Philips drawings and specifications.
- ☐ Floors are tiled/covered finished. Flooring is covered with protective covering (scratch protection).
- ☐ Ceiling lights installed.
- ☐ Cable conduit and ductwork installed and clean. Position checked. Duct covers in place but not finally closed. Cable opening are clear, without sharp edges. Pull strings in conduit. Installation per Philips specifications.
- ☐ HVAC environmental equipment installed and working according to Philips specifications.
- ☐ Ceiling installation completed.
- ☐ Electrical preparation according to Philips specifications.
- ☐ All network cabling, drops installed according to Philips specifications (including hardcopy cameras).
- ☐ All pre-cabling identified on Philips drawings has been installed.
- ☐ Pre-move survey completed - Delivery route identified.
- ☐ Lead glass installed ***.
- ☐ X-ray warning lights installed ***.
- ☐ Dedicated phone line for modem use***.
- ☐ Room has been cleaned ***.
- ☐ Cabinets and casework installed***.

Approved for Delivery

Project Manager **Date**

Service Engineer **Date**

PHILIPS

- Customer Name -
City, ST

Bucky Diagnost FS Standard / Optimus 30

09.30.04

Date | O.A. Number

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N-SRD030017

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